

ABSTRACT

A refraction measuring instrument for measuring the refraction of an eye to be examined while the subject is viewing an external object in a more natural posture. A measuring light beam from a light source 21 is reflected from a mirror 25, shaped into a beam with a ring cross section, directed to a free curved surface prism 31 along an optical axis O2, reflected from a surface 31b and a beam splitting surface 31a, guided to an eye E along an optical axis O1 together with the visible light from outside the instrument, and form a ring pattern on the fundus F. The measurement beam reflected from the fundus F is received by a CCD 23 through the free curved surface prism 31 and a prism 22, and a ring pattern is imaged. A calculation control device 4 analyzes the imaged ring pattern and calculates the sphericity, the degree of astigmatism, and the astigmatic axis angle. For measurement, the subject A wears the refraction measuring instrument 1 on the head H through a wearing section 1a.